

Title (en)  
PRECONDITIONING AUDIO SIGNAL FOR 3D AUDIO VIRTUALIZATION

Title (de)  
VORKONDITIONIERUNGSAUDIOSIGNAL FÜR 3D-AUDIOVIRTUALISIERUNG

Title (fr)  
PRÉCONDITIONNEMENT DE SIGNAL AUDIO POUR VIRTUALISATION AUDIO 3D

Publication  
**EP 3698555 A4 20210602 (EN)**

Application  
**EP 18867767 A 20181018**

Priority  
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• US 2018056524 W 20181018

Abstract (en)  
[origin: US2019116451A1] The methods and apparatus described herein provides technical solutions to the technical problems facing crosstalk cancellation for 3D audio virtualization. One technical solution includes preconditioning audio signals based on crosstalk canceller characteristics and based on characteristics of sound sources at intended locations in 3D space. To provide these technical solutions, the systems and methods described herein include an audio virtualizer and an audio preconditioner. In particular, the audio virtualizer includes a crosstalk canceller, and the audio preconditioner preconditions audio signals based on characteristics of a crosstalk cancellation system and based on characteristics of a binaural synthesis system or intended input source location in space. This solution improves the overall accuracy of virtualization of 3D sound sources and reduces or eliminates audio artifacts such as incorrect localization, inter-channel sound level imbalance, or a sound level that is higher or lower than intended.

IPC 8 full level  
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Citation (search report)  
• [XYI] US 6243476 B1 20010605 - GARDNER WILLIAM G [US]  
• [XYI] US 2008031462 A1 20080207 - WALSH MARTIN [US], et al  
• [T] EP 0990369 A2 20000405 - BRITISH TELECOMM [GB]  
• See references of WO 2019079602A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 10820136 B2 20201027; US 2019116451 A1 20190418**; CN 111587582 A 20200825; CN 111587582 B 20220902; EP 3698555 A1 20200826; EP 3698555 A4 20210602; EP 3698555 B1 20230823; EP 3698555 C0 20230823; JP 2021500803 A 20210107; JP 7345460 B2 20230915; KR 102511818 B1 20230317; KR 20200089670 A 20200727; WO 2019079602 A1 20190425

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**US 201816163812 A 20181018**; CN 201880081458 A 20181018; EP 18867767 A 20181018; JP 2020522308 A 20181018; KR 20207014199 A 20181018; US 2018056524 W 20181018